

REMARKS

In response to the Office Action mailed May 8, 2002, Applicants respectfully request reconsideration. Each of the objections and rejections made in the Office Action is addressed herein. The application as now presented is believed to be in allowable condition.

Claims 1-11 and 13-107 are now pending in this application, of which claims 1, 10, 14, 47, 79, 81 and 84 are independent claims. By this amendment, Applicants have cancelled claim 12, amended claims 1, 4, 5, 7, 10, and added new claims 21-107 to further define Applicants' contribution to the art. All of the newly added claims clearly are supported throughout Applicants' specification; accordingly, no new matter is added.

A. Claim Objection

On page 2 of the Office Action, claim 7 was objected to for lack of antecedent basis for the term "lighting device." Accordingly, Applicants have amended claim 7, and respectfully requests the objection of claim 7 to be withdrawn.

B. Claim Rejections under 35 U.S.C. § 112

The Office Action, on page 2, rejects claim 5 under 35 U.S.C. § 112 for alleged lack of enablement of the term "imperfections." The Office Action stated that "[a]lthough the specification literally discloses imperfections, it fails to describe what elements in the material constitute the imperfections, and what effect the imperfections of the material have on the device...". Applicants respectfully disagree. However, to advance prosecution of the application, Applicants have amended claim 5 to remove the word "imperfections," and accordingly it is believed that the rejection of claim 5 is now moot.

C. Claim Rejections under 35 U.S.C. § 102

On pages 2 through 4 of the Office Action, claims 1-20 were rejected as allegedly being anticipated by Downing (U.S. Patent No. 5,988,645). Applicants respectfully traverse these rejections.

1. Overview of the Invention

In various embodiments, Applicants' invention is directed generally to methods and apparatus for changing the color of an enclosure. To this end, the specification discloses various apparatus comprising an illumination device for changing a color of a portion of an enclosure by illuminating a portion of the surface of the enclosure from within the enclosure and/or by projecting illumination onto the surface of the enclosure from outside the enclosure. Each of Applicants' independent claims embraces the concept of illuminating at least part of an enclosure with variable color light (e.g., at least two different colors).

For example, the specification discusses edge-lighting and back-lighting of a material forming the surface of the enclosure. (See p. 3, line 22 and p. 4, lines 15-30). Since the material may be partially transparent, the effect of edge-lighting or back-lighting may be visible outside the enclosure, giving it the appearance of changing color. (See specification p. 4, line 12).

There are many possible embodiments of this invention. The enclosures could be device enclosures for computers, electronics, or appliances, although they are not limited to these examples. Furthermore, the color change may be in response to input from a computer, a network, a user, an external sensor, or other input devices. As an illustration of one embodiment, a computer incorporating the concepts of the present invention may be made with a partially transparent material and have the ability to change color depending on the décor of the room, without any external illumination. (See specification, p. 6, lines 9-10). This feature could be user-controlled or controlled by an external sensor.

The foregoing overview is provided merely to assist the Examiner in appreciating various aspects of the present invention as recited in Applicants' claims. However, each of the claims is not limited merely to the various aspects discussed above. Therefore, the Examiner is respectfully requested to give careful consideration to the language of each of the independent claims and to address each on its own merits.

2. Discussion of the Downing Reference

The Downing reference is directed to a moving object monitoring system. In one embodiment, Downing discloses a target shooting system for tracking the direction and speed of a bullet (Downing, col. 5, line 61). Figure 1 of Downing discloses an enclosure 19 with a video projector 40 inside of it. The projector illuminates a target screen 12 with various targets,

shapes, or videos, as controlled by a computer 20 connected to the video projector via an interface device 34. As depicted in Figure 1, the light from the projector is reflected off of a mirror 62 and through a lens 64 out of the enclosure and onto the target screen. When operated, the video projector illuminates the target screen and the user fires a gun G at the displayed target. Light panels 14, 16 measure the speed and angle of the bullet as it approaches the target screen, and this information is reported on the computer display (Downing, col. 6).

3. Applicants' Claims Patentably Distinguish Over Downing

a. Claims 1-9

Applicants' claim 1, as amended, is directed to a color changing device, comprising an enclosure formed at least in part by an at least partially transparent material, and an illumination device, disposed within the enclosure and configured to illuminate said material, wherein the illumination device capable of generating at least two colors. On page 3, the Office Action asserts that Downing discloses all the limitations of claim 1. Applicants respectfully disagree.

Downing does not disclose or suggest the apparatus of claim 1, as amended. In particular, Downing does not disclose or suggest an enclosure formed at least in part by an at least partially transparent material, and an illumination device configured to illuminate said material, as recited in claim 1. Rather, Downing's teachings are limited to the illumination of an opaque target screen outside an enclosure by a video projector inside an enclosure. (See Figure 1).

Assuming only for purposes of this argument that Downing's target screen could constitute the "material" of claim 1, the illuminated target screen does not form any part of the enclosure. Additionally, the illuminated target screen is not partially transparent (indeed a partially transparent target screen would make little sense in the context of Downing). For at least the foregoing reasons, claim 1 patentably distinguishes over the system disclosed in Downing and is in condition for allowance. Accordingly, the rejection of claim 1 under 35 U.S.C. §102(e) should be withdrawn.

Claims 2-9 depend from and further limit claim 1 and are believed to be in allowable condition for at least the same reasons. Accordingly, for the sake of brevity, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur that the basis for the rejection of

any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

b. Claims 10-11 and 13

Applicants' claim 10, as amended, is directed to a method for changing a color of a device having an enclosure formed at least in part by a partially transparent material, the method comprising acts of: providing an illumination device disposed in the enclosure, the illumination device capable of generating at least two colors; illuminating at least a portion of said enclosure via the illumination device; and, changing the color of said illumination. On page 4, the Office Action asserts that Downing discloses all the limitations of claim 10. Applicants respectfully disagree.

Downing does not disclose or suggest the method of claim 10, as amended. While the method of claim 10 discloses the step of "illuminating at least a portion of said enclosure via the illumination device," Downing does not disclose the illumination of any portion of an enclosure. Rather, Downing is directed not to illuminating the enclosure itself, but to illuminating a target screen outside the enclosure (See Figure 1, col. 14 line 34). Therefore, claim 10 patentably distinguishes over Downing, and the Applicants respectfully request that the rejection of claim 10 under 35 U.S.C. §102(e) as allegedly being anticipated by Downing be withdrawn.

Claims 10-11 and 13 depend from and further limit claim 10 and are believed to be in allowable condition for at least the same reasons.

c. Claims 14-20

Applicants' claim 14 is directed to a method for changing the color of a device, the device having an enclosure, the method comprising acts of: generating an input signal; generating a control signal in response to the input signal; communicating the control signal to a lighting system; and arranging the lighting system to illuminate at least a portion of the device enclosure. The Office Action asserts on page 4 that Downing discloses all the limitations of claim 14. Applicants respectfully disagree.

Downing does not disclose or suggest the method of claim 14. As discussed, Downing's disclosure is limited to the illumination of a target screen. On the other hand, claim 14 includes a step for arranging a lighting system to illuminate at least a portion of a device enclosure.

Downing's video projection is not a "lighting system" similar to that disclosed in connection with the present invention. Furthermore, Downing's video projector, even if considered a "lighting system," is specifically arranged to illuminate a target screen outside the enclosure, via a system of mirrors 62 and lenses 64 (See Figure 1). It is not arranged to illuminate at least a portion of the device enclosure. Moreover, Downing simply does not discuss any color change of the enclosure (Figure 1, item 19), and Downing's disclosure has nothing to do with a color-changing device. Downing does not, therefore, disclose all the limitations of claim 14.

For at least the foregoing reasons, claim 14 patentably distinguishes over Downing and is in condition for allowance. Accordingly, the rejection of claim 14 under 35 U.S.C. 102(e) as allegedly being anticipated by Downing should be withdrawn.

Claims 15-20 depend from and further limit claim 14 and are believed to be in allowable condition for at least the same reasons.

C. Newly Added Claims

New claims 21-107 have been added to further define Applicants' contribution to the art.

New claims 21-45 depend from claim 1, and are believed to be allowable based at least upon its dependency.

New claim 46 depends from claim 10, and is believed to be allowable based at least upon its dependency.

New independent apparatus claims 47, 79 and 81, and new independent method claim 84, are directed generally to the concept of illuminating at least a portion of a surface of an enclosure (e.g., an appliance, an electronics device) with variable color light such that at least the portion of the enclosure appears to have a variable color to an observer viewing the enclosure. As discussed above, Downing, as well as the other references of record, are completely silent with respect to illuminating an enclosure with variable color light. Accordingly, the new independent claims, as well as the claims dependent therefrom, are believed to be in allowable condition.

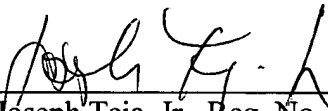
CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below to discuss any outstanding issues related to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted
Kevin J. Dowling, et al., Applicants

By:



Joseph Teja, Jr., Reg. No. 45,157
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Tel. No.: (617) 720-3500
Attorneys for Applicant(s)

Docket No. C01104/70074
Date: September 9, 2002

Version with Markings to Show Changes Made

Claims 1, 4, 5, 7, and 10 have been amended as follows:

1. (Amended) A color-changing device, comprising:
an enclosure [including at least a piece of] formed at least in part by an at least partially transparent material [which is to be illuminated]; and
an illumination device, disposed within the enclosure, configured to illuminate said material, the illumination device capable of generating at least two colors.
4. (Amended) The color-changing device of claim 1, wherein said [piece of] material is at least one of transparent, semi-transparent, translucent, and semi-translucent.
5. (Amended) The color-changing device of claim 1, wherein said [piece of] material [contains imperfections] includes means for reflecting light off of or out of the material.
7. (Amended) The color-changing device of claim 1, further comprising a controller for controlling [the lighting] the illumination device.
10. (Amended) A method for changing [the] a color of a device having an enclosure formed at least in part by a partially transparent material, the method comprising acts of:
providing an illumination device disposed [therein] in the enclosure, the illumination device capable of generating at least two colors;
illuminating at least a portion of said [device] enclosure, via the illumination device; and
changing the color of said illumination.